110

110 HAAS I

HAAS CNC vertical machine #1

1-Mill as per folio FB090 & dwg D3901,

FOLIO REV: AA
DWG REV: E

2-Deburr as required

0.00

NCR: Y	·												
									-		QA Closed:	Date	:
Work Orde	r:					DISPOSITION				_	EPARTMENT,	_	
Part N	o.					Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	o			· · · ,		Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other
Root					Descri	ption of work order update	li	nitial	Act	ion	Sign &		
Cause	D	ite	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
oc/Data													
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Inapproved													
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Ţ	Ben	ding				Bend		Grain			Ovalized		Pressure/Forced
***	Cen	re Not	Concen	tric to C	o/s 🗌	BOM/Route	\Box	Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Crac	ks				Broken/Damaged	П	Inspecti	on Incomplete	[-	Part Incorred	ct	Weld
	Crus	hed/Cr	imped			Burrs · · ·	П	Instruct	ions Incomplete/L	Inclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuff	s				Contamination		Mainte	nance	Г	Part Moved		•
1	Hea	Treat				Countersink		Mislabe	led		Positioned V	Vrong	
	Insp	ection S	Strip in	Tube		Cut Too Short	П	Misread			Power Loss/	Surge	Other
		les in B				Drill Holes	П	Offset		_			
	_ ' '			xtrusion		Drawing		Out of C	Calibration				
		ing Sec				Finish	П	Out of S	equence				
	─	_	t in Tub	e		Folio	П	Outside	Dimensions		•		

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde May-13-13 1:1.		101686		*101	686*						Page 2
Item ID: Revision ID:	D3901-3	3		Accept	*N90	NN4 N	100	N *	Setup Sta	IV	S1*
Item Name: Start Date: Required Date: Reference:	Bar 5/09/13 5/21/13	Start Qty: 10.00 Req'd Qty: 10.00	*10* *10*		Cust Iten Custome					' "N	S2*
Approvals:	Proces QC:	s Plan:	Date:	Tooling: SPC (Y/N):		Date:			Run Sta Sto	VI	R1* R2*
Sequence ID/ Work Center II 120 *120* QC Quality Control	D	Operation Description QC2- Inspect parts off management Memo ***EXTRA	achine FAI/FAIB MATERIAL WILL BE CU	Set Up/ Run Hours 0.00 0.00 T ON ASSEMBLY***	Tool ID		Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp AS 08
130 *130* QC Quality Control		QC8- Inspect parts - seco Memo ***EXTRA	nd check MATERIAL WILL BE CU	0.00 0.00 T ON ASSEMBLY***	F.A. 13/0	05/26		10		- 	·
140 *140 * Packaging		Identify as per dwg & Sto	ck Location: WA OD	0.00				10	A	13-3	F-27

Packaging

												DQA:	Da	ate:	<u> </u>
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORI	MANCE / UP	DATE					
												QA Closed:	Da	ite:	
Work Ord	or.					DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
WOIK OIG	C1.					Rework	1		Skid-tube	Crosstube	Г	1	Water Jet		Engineering
Part i	No.					Scrap			Machining	Small Fab	-	Pro	d. Eng. Coor.	-	Quality
	,					Use-as-is		Thern	noforming	Finishing		Rec/Stor	e/Packaging		Other
NCR I	Vo.					Work Order Update]		Large Fab	Composite	L_	_	Supplier	L	
Root		<u> </u>			Descri	tion of work order update		Initial	Δι	ction		Sign &		_	I
Cause		Date	Step	Qty		or Non-conformance	1	nief Eng	i	cription		Date	Verificatio	n	QC Inspector
Doc/Data										-					·
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Unapproved			<u> </u>		<u> </u>		<u>l</u>								1
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Landi	ng (Gear				General		_			_	_	*	_	
		Bending			. [Bend		Grain			L	Ovalized			Pressure/Forced
	Ĺ	Centre No	ot Concei	ntric to	o/s	BOM/Route		Hardwa	ire		L	Over/Under	tolerance	L	Temperature/Cure
		Cracks				Broken/Damaged Inspection Incomplete						Part Incorred	ct		Weld

Instructions Incomplete/Unclear

Maintenance Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Wrong Stock Pulled

Other

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Crushed/Crimped

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Work Orde <i>May-13-13 1:11</i>		101	686		*101	1686*	,						Page 3
Revision ID:	D3901-3	,			Accept	*N900	040	100)*	Setup	Start		S1* S2*
Start Date: Required Date: Reference:	5/09/13 5/21/13		Start Qty: 10.00 Req'd Qty: 10.00	*10* *10*		Cust Item II Customer:	D:						
Approvals:	Process QC:		ı:	Date:	Tooling: SPC (Y/N):		nte:			Run	Start Stop		R1* R2*
Sequence ID/ Work Center II)		Operation Description QC21- Final Inspection -	Work Order Release	Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accep Qty	t Rej Qty		Reject Number	Insp. Stamp

0.00

Memo

150

Quality Control

13/5/21-4 N305-27

NCR: Yes / No

DQA: Date:

NCR: Y	es / N	0			WORK ORDER NON-	·CON	NFORM	MANCE / UPI	DATE	QA Closed:	Da	te:
Nork Orde	··				DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part N NCR N	o				Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	- 4	Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	li	nitial	Act	ion	Sign &		
Cause	Dat	e Step	Qty		or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verificatio	n QC Inspector
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upplier						1						
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napproved					·							
						FAUL	T CATE	GORY				
Landin	g Gear				General				_	٦		_
L	Bendii	ng			Bend		Grain			Ovalized		Pressure/Forced
	Centre	Not Conce	entric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Ш	Inspecti	on Incomplete		Part Incorred	t	Weld
	Crush	ed/Crimped	i	_	Burrs	Ш	Instruct	ions Incomplete/U	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved	•	
[Heat 1	reat			Countersink		Mislabe	led		Positioned V	/rong	
	Insped	tion Strip in	n Tube		Cut Too Short		Misread			Power Loss/	Surge	Other
[Ripple	s in Bend			Drill Holes		Offset					
	Torqu	e Waves in	Extrusio	n 🗌	Drawing		Out of 0	Calibration				
	Turnir	g Sequence	e		Finish		Out of S	Sequence				
Ţ	T _{W2V0}	/Twict in Tu	ho		Folio		Outside	Dimensions				

Picklist Print

May-13-13 1:11:46 PM

Work Order ID:

101686

Parent Item:

D3901-3

Parent Item Name:

Bar

Start Date: 5/09/13

Required Date: 5/21/13

Start Qty: 10.00

Required Qty: 10.00

Comments:

IPP RevA: New issue DD verified by:EC

verified by:JLM

IPP RevB: Now on cnc JFS 12/02/13

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.250x0.500		Purchased	No			100	f	482.3470	5.573	58.663158			
304 BAR .250 x .500					•					N/S	13	-05	-2-
				Location		Loc Oty	Lo	c Code		Ψ,	\ /	•	_
				MAT049		482.347							
				1239	02	31.492							
				1245	18	222.855							
				1253	67	228	110		<u>(e</u>	<u>o</u>			

				·							DQA:	Date	:,
NCR:	Yes	/ No				WORK ORDER NON-O	COI	VFOR	MANCE / UP	DATE			
!						1					QA Closed:	Date	:
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
						Rework]		Skid-tube	Crosstube]	Water Jet	Engineering
Part i	۷o					Scrap]		Machining	Small Fab	-1	d. Eng. Coor.	Quality
						Use-as-is			noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR 1	No. –					Work Order Update	ا ز		Large Fab	Composite		Supplier	ا ا
Root	\Box				Descri	ption of work order update		nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data							1						İ
Equip/Tooling	Ш										•		
Operator	Ш												
Material	Ш											·	
Setup	Ш						l	1			ļ		
Other	Ц						l						
Process	Ш								•				
Supplier	Ц												
Training	Ц											·	
Unapproved							<u>L</u>				<u> </u>		
							AUL	T CATE	GORY				
Landi	٦				_	General		lc:	-		Ovalized		Pressure/Forced
	-	Bending			o/s	Bend	\vdash	Grain		-		teleranes	⊣
	-	Centre No	ot Concer	itric to	^{0/5}	BOM/Route	⊢	Hardwa		<u> </u>	Over/Under Part Incorre	<u> </u>	Temperature/Cure Weld
	${f o}$	Cracks	C:		-	Broken/Damaged	$\overline{}$	1	on Incomplete	llasloss	Part Income	<u> </u>	Wrong Stock Pulled
	-	Crushed/	Crimpea		<u> </u>	Burrs	-	Mainte	ions Incomplete/	Unclear	Part Moved	2211B	
	$\boldsymbol{\vdash}$	Cuffs	. +		-	Contamination Countersink	\vdash	Mislabe			Positioned V	Vrong	
	-	Heat Trea		Tuba	\vdash	Cut Too Short	-	Misread		·	Power Loss/		Other
		Inspection Ripples in		iube	\vdash	Drill Holes	\vdash	Offset	•	<u>L</u>	Tuomer ross	Juige	Tottlet
	-	Rippies in Torque W		vtrucio	, H	Drawing	-	4	Calibration				
I	Li	Torque W	raves in E	.xti u510	'' {	Diaming	L	Jour or c	ימווטו מנוטוו				

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

DART AEROSPACE LTD	Work Order:
Description: RAR	Part Number: D3901-3
Inspection Dwg: D3901 Rev: E	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.18	+/030	0.172	/		Vern	6A-01
0.50	+1030	0.505	~		1)	Л
1.75	+1030	1.760	1		il .	C)
0.75	+/030	0.745	✓		И	1]
0.50	+1-030	0.510			1	-)1
4.00	+1030	4.012			11	f ₄
4.75	+/030	4.750	>		11	(1
16.00	+/030	16.00	>		Tape	6A-12
31.00	4/030	31.00	\		h	0
45.62	4030	45.62	ን		11	1)
51.12	+1030	51.12	>		4	()
62.75	+1030	62.75	>		11	11
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			······································			
					····	
P. III			_			· · · · · · · · · · · · · · · · · · ·

Measured by: 🖒 🗚	7 5 08	Audited by:	F.K.	Preliminary Approval:	
Date: 13 05	24 9-83	Date:	13/05/26	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	









